



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/665,121

09/22/2003

Tomoaki Tanaka

117224

5415

25944

7590

10/22/2004

OLIFF & BERRIDGE, PLC

P.O. BOX 19928

ALEXANDRIA, VA 22320

EXAMINER

GLEITZ, RYAN M

ART UNIT

PAPER NUMBER

2852

DATE MAILED: 10/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/665,121	Applicant(s) TANAKA ET AL.	
	Examiner Ryan Gleitz	Art Unit 2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4 and 6-9 is/are rejected.
- 7) ☒ Claim(s) 2,3,5 and 10-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/22/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/5/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Figures 8A-C should include the reference numeral --91-- to represent the developer feed port or partitioning plate.

Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The specification is objected to because the term "CV value" is not clearly defined. The CV value is mentioned by the specification on page 14, but it is not clear how the "CV value" is calculated.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5 and 10-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation "CV value" is not clearly defined in the

Art Unit: 2852

disclosure. Without an adequate basis in the Specification, the limitation "CV value" cannot be distinctly claimed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamazaki et al. (JP 08-248668).

Yamazaki et al. disclose a developing method for developing an electrophotographic image by use of a developing device comprising a developing mechanism having a developer carrier ([0004]-[0005]), and a developer supply mechanism having storing means for the developer comprising the steps of using a start up developer, starting toner (abstract, line 5), at an initial state of use of the developing mechanism; and using a replenishing developer, auxiliary toner (abstract, line 6), differed in grain size (abstract, line 7) or grain size distribution from the start-up developer after an end of the initial state of use of the developing mechanism.

Regarding claims 4, the volume average grain size of the start up developer is between 1.00 and 1.15 times that of the replenishing developer (abstract, line 7). The size of the start up developer is 6-10 um (abstract, line 7), which means the size of the replenishing developer is 5.2-8.7 um. This reads on the range $7.5\text{um} < DV_{tc} < 8.5\text{um}$. Also, the difference between the respective volume average grain size is 0.8 to 1.3 um, which reads on the claimed range 0.3 um to 1.2 um with sufficient specificity.

Claims 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Ito et al. (JP 10-307464)

Ito et al. disclose a developing device comprising a developing mechanism (41) having a developer carrier (415) for carrying a developer along a preset circulating route including a developing area and a developing restricting element (418) for restricting the developer on the developer carrier, and a developer supply mechanism having storing means (R1) for storing the developer, wherein the storing means (R1) is filled with a start-up developer (413) in the vicinity of the developer carrier (415) and a replenishing developer (411) remoter than the start-up developer from the developer carrier (415), and both of the start-up developer and the replenishing developer have different grain sizes or grain size distributions (abstract, lines 4-7).

Regarding claim 8, the storing means further comprises a developer storing part (R1) filled with the start-up developer at least in the vicinity of the developer carrier (415); and a replenishing developer cartridge (411) part filled with developer and provided separably from the developer storage part, which successively replenishes the replenishing developer to the developer storage part.

Regarding claim 9, figure 1 illustrates a printing device comprising an optical writing system (L), a developer device (41), a photosensitive drum (43), a transfer unit (40), and a fixing unit (47).

Regarding claims 1 and 6, the developer is a nonmagnetic one-component developer ([0007]).

Allowable Subject Matter

Claims 2 and 3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 5 and 10-12 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and the 35 U.S.C. 112, second paragraph rejection above is overcome.

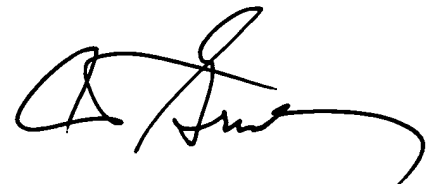
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Gleitz whose telephone number is (571) 272-2134. The examiner can normally be reached on Monday-Friday between 9:00AM and 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


rg



Arthur T. Grimley
Supervisory Patent Examiner
Technology Center 2800